ABSTRACT

The present invention is a method of etching a lower layer film (64) of an organic material formed on a surface layer (61) of a substrate, using an upper layer film (63) of an Si-containing organic material as a mask. A mixed gas containing an NH_3 gas and an O_2 gas is supplied into the processing vessel as an etching gas, so as to perform etching by a plasma of the etching gas. When the etching gas is supplied into the processing vessel, a CD shift value of etching can be controlled by adjusting a flow ratio of O_2 gas to the NH_3 gas. Specifically, a satisfactory CD shift value can be obtained when the flow ratio is from 0.5 to 20%, and preferably, 5 to 10%.